

# **Modelling of Diffuse Scattering Effects for Outdoor Ray-Tracing**

**Project Design Plan**

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**Research Question:** In what ways can current heuristic models of scattering be critically assessed and developed to improve their predictive reliability?

**Project Scope:**

- Formulation of the Effective Roughness Approach, with known limitations
- Basic plane-wave setup and comparison of Effective Roughness model vs.:
  - Geometrical Optics
  - Physical Optics
  - Method of Moments
- Variation of setup parameters and its effect on Effective-Roughness predictability, including:
  - $\lambda$               wavelength
  - $\Delta w$             numerical integration steps along the wall